

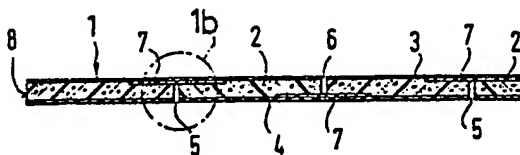
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(54) Mat for sporting or gymnastic purposes

(57) An elastic mat (1) is provided for sporting or gymnastic purposes, whose length is greater than its width and which can be packed up so as to save space for transportation and for storage. The mat (1) comprises at least one elastic layer (2) made of foam as well as hard-wearing dense top and bottom layers (3,4). Incisions (5,6) which are equidistant from each other and extend transversely to the longitudinal direction of the mat and over the entire width of the mat extend from one face of the mat or both faces thereof almost to the opposite face.

FIG. 1a



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FIG. 1a

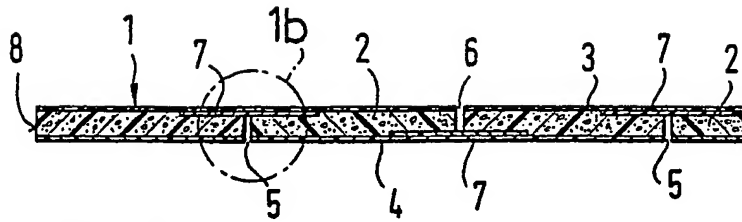


FIG. 1b

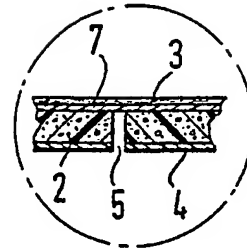


FIG. 2

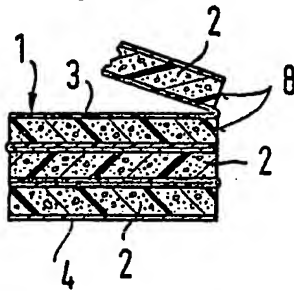


FIG. 3

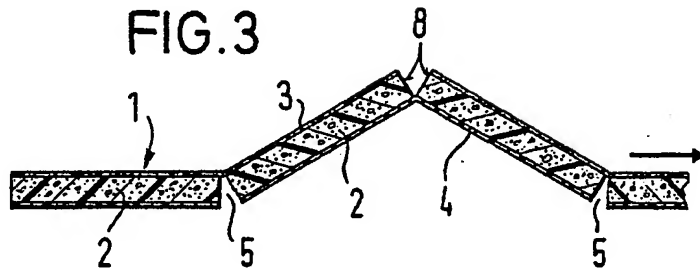


FIG. 6

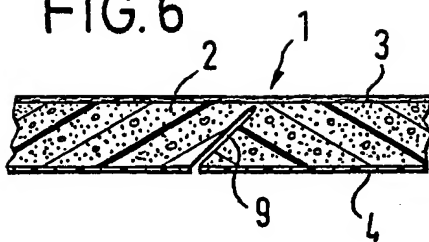


FIG. 7

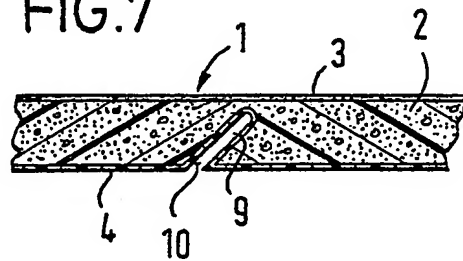


FIG. 4

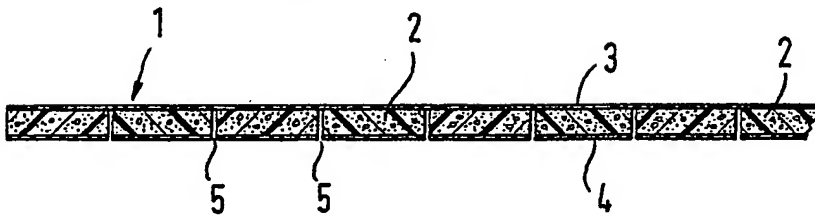
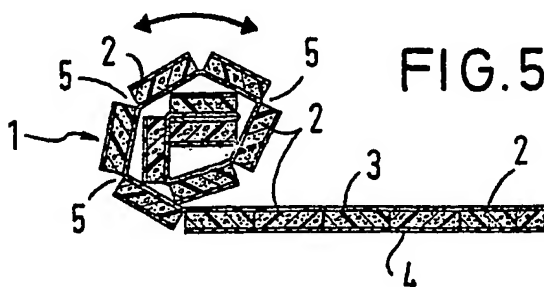


FIG. 5



## SPECIFICATION

## Mat for sporting or gymnastic purposes

5 The invention relates to an elastic mat for sporting or gymnastic purposes, whose length is a multiple of its width and which can be packed up so as to save space for transportation and for storage.

Mats of this type, particularly those used for floor exercises, are generally up to 12 m long and, after use, are wound into tubes directly by hand or by means of special apparatuses and are then tied fast by straps or belts. However, several difficulties arise in this process. Several people are generally required for winding the mats up directly by hand. Although winding devices which have been specifically developed for this purpose do make the process much simpler, they require a lot of space since the rolls cannot be stacked or stood vertically. As storage rooms in sport halls are frequently barely sufficient, the need for more space presents a problem and often goes against the acquisition of such winding devices which are quite practical in themselves.

An object of the invention is to make it substantially easier to transport and to store as well as to set up and put away these very long elastic mats and also to allow the mats to be laid very flat when in use.

According to the invention there is provided an elastic mat for sporting or gymnastic purposes, whose length is a multiple of its width and which can be packed up so as to save space for transportation and for storage, comprising at least one intermediate elastic layer made of foam and hard-wearing dense top and bottom layers, wherein incisions which are equidistant from each other and extend transversely to the longitudinal direction of the mat and over the entire width thereof extend from one side of the mat or both sides thereof almost to the opposite side.

Owing to the fact that the mat is provided with incisions at regular intervals, it is possible to fold up or roll up these mats in a space-saving way after use so that they are simple to transport and can be stored or stacked in a space-saving manner.

The structure and use of embodiments of the invention are described in more detail with reference to the accompanying diagrammatic drawings, in which:

*Figure 1a* shows a longitudinal section through an elastic mat with alternate incisions;

*Figure 1b* shows a detail of the mat according to *Figure 1a* in the region of an incision;

*Figure 2* shows the mat in stacked form;

*Figure 3* shows the mat in the almost laid open condition;

*Figure 4* shows an elastic mat with incisions on one side

*Figure 5* shows the mat according to *Figure 4* during the rolling up procedure;

*Figure 6* shows a mat with oblique incisions; and

*Figure 7* shows a mat with incisions covered by a bottom layer.

The elastic mat 1 shown in *Figures 1a* and *1b* comprises an elastic intermediate layer 2 which is preferably from 10 to 100 mm thick, a hard-wearing top layer 3 of textile and/or synthetic material, and a non-slip, wear-resistant bottom layer 4, for example

of coated polyester fabric or a protective layer. The elastic layer 2 may be composed, for example, of a polyurethane compound foam, a thermoplastic foam material in the form of PVC or PE, or a combination of polyurethane compound foam and thermoplastic foam in a plurality of layers.

In order to simplify transportation and storage, the mat is provided according to the invention with incisions 5 or 6, these incisions being made alternately in the embodiment shown i.e. incisions 5 extend inwardly through the bottom layer 4 and incisions 6 extend inwardly through the top layer 3. These incisions extend over the entire width of the mat 1 and run perpendicularly to the longitudinal direction of the mat.

*Figure 1b* shows an enlarged detail in the region of the incisions 5 shown in *Figure 1a*. In this incision 5 starting from the bottom layer 4, a reinforcing inlay 7 is provided beneath the top layer 3 in the region of the incision 5 in order to prevent the top layer from breaking or tearing at the position of the incisions. A similar reinforcing inlay 7 can also be provided on the interior of the bottom layer 3 in the region of the incisions 6, as shown in *Figure 1a*.

As shown in *Figure 2*, the mat 1 with the alternate incisions 5 and 6 can be folded up and stacked in a space-saving zig-zag formation. The faces 8 at the incisions, which are exposed after folding and are not covered with surface material, can optionally be provided with edge protection such as, for example, a lacquer.

*Figure 3* shows how the mat can be drawn apart again in concertina fashion and laid flat in a simple way after being folded.

*Figure 4* shows an embodiment in which the elastic mat 1 has incisions 5 only from the bottom side. This affords the advantage that the top layer 3 is not interrupted. In addition, this mat can easily be wound up, as shown in *Figure 5*, if the distances between the incisions 5 are not too far apart, i.e. in the range of from 0.1 to 1 m. This embodiment also demonstrates that it is possible to lay the mat flat without tension and to wind it up easily in a space-saving manner, owing to the incisions.

*Figure 6* shows another embodiment, in which the incisions 9 are made not perpendicularly to the top layer 3 but at an angle which can vary between 20 and 90° to the top layer.

*Figure 7* shows another embodiment in which the bottom material 4 is not interrupted at the point of the incision 9 but covers the two faces of the incision 10. This continuous design of the bottom and top web is also feasible with the other embodiments shown.

The mat according to the invention is much simpler to set up and put away than are known exercise mats and can be folded or rolled up in a space-saving manner to allow simple transportation and space-saving storage. Another advantage is that the mat according to the invention lies flatter immediately after being spread out and still maintains the advantages of a coherent long mat.

## CLAIMS

1. An elastic mat for sporting or gymnastic pur-

- poses, whose length is a multiple of its width and which can be packed up so as to save space for transportation and for storage, comprising at least one intermediate elastic layer made of foam and hard-
- 5 wearing dense top and bottom layers, wherein incisions which are equidistant from each other and extend transversely to the longitudinal direction of the mat and over the entire width thereof extend from one side of the mat or both sides thereof almost to the
- 10 opposite side.
2. A mat according to Claim 1, wherein the incisions extends only from the bottom side.
3. A mat according to Claim 1, wherein the incisions extend alternately from opposite sides of the
- 15 mat.
4. A mat according to any preceding Claim, wherein the incisions run at an angle of from 20 to 90° to the sides of the mat.
5. A mat according to Claims 1 to 4, wherein that
- 20 layer which is continuous in the region of an incision has a reinforcing inlay on the side of the layer facing the incision.
6. A mat according to any preceding Claim, wherein the layer or layers on the side or sides of the
- 25 mat from which the incisions extend is uninterrupted and covers or cover the side faces of the incisions.
7. A mat according to any preceding Claim, wherein the elastic layer is from 10 to 100 mm thick and is formed of polyurethane compound foam.
- 30 8. A mat according to any one of Claims 1 to 6, wherein the elastic layer is from 10 to 100 mm thick and is formed of thermoplastic foam material in the form of PVC or PE.
9. A mat according to any one of Claims 1 to 6,
- 35 wherein the elastic layer is formed of a combination of polyurethane compound foam and thermoplastic foam in a plurality of layers.
10. A mat according to any preceding Claim, wherein the top layer is formed of textile and/or
- 40 synthetic material.
11. A mat according to any preceding Claim, wherein the bottom layer is formed of non-slip wear-resistant material in the form of coated polyester fabric.
- 45 12. A mat according to any one of Claims 1 to 10, wherein the bottom layer is formed of a protective lacquer.
13. An elastic mat for sporting or gymnastic purposes, substantially as herein described with reference to Figures 1a, 1b 2, and 3, or Figures 4 and 5,
- 50 or Figure 6, or Figure 7 of the accompanying drawings.